

TENTATIVE ORDER NO. R9-2002-0020

ATTACHMENT D

40 CFR 131.38

**ESTABLISHMENT OF NUMERIC CRITERIA FOR PRIORITY TOXIC
POLLUTANTS FOR THE STATE OF CALIFORNIA**

- (a) Scope. This section promulgates criteria for priority toxic pollutants in the State of California for inland surface waters and enclosed bays and estuaries. This section also contains a compliance schedule provision.

- (b)(1) This table describes the criteria for Priority Toxic Pollutants in the State of California.

Dated: April 27, 2000.

Carol Browner,
Administrator.

For the reasons set out in the preamble, part 131 of chapter I of title 40 of the Code of Federal Regulations is amended as follows:

**PART 131—WATER QUALITY
STANDARDS**

1. The authority citation for part 131 continues to read as follows:

Authority: 33 U.S.C. 1251 *et seq.*

Subpart D—[Amended]

2. Section 131.38 is added to subpart D to read as follows:

§ 131.38 Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California.

(a) *Scope.* This section promulgates criteria for priority toxic pollutants in the State of California for inland surface

waters and enclosed bays and estuaries. This section also contains a compliance schedule provision.

(b)(1) Criteria for Priority Toxic Pollutants in the State of California as described in the following table:

BILLING CODE 6560-S0-P

| A | | B Freshwater | | C Saltwater | | D Human Health (10 ⁻⁶ risk for carcinogens) For consumption of: | |
|--------------------------------|---------------|--|---|--|---|---|-----------------------------------|
| # Compound | CAS Number | Criterion Maximum Conc. ^d B1 | Criterion Continuous Conc. ^a B2 | Criterion Maximum Conc. ^d C1 | Criterion Continuous Conc. ^d C2 | Water & Organisms (µg/L) D1 | Organisms Only (µg/L) D2 |
| 1. Antimony | 7440360 | | | | | 14 a,s | 4300 a,t |
| 2. Arsenic ^b | 7440382 | 340 i,m,w | 150 i,m,w | 69 i,m | 36 i,m | | |
| 3. Beryllium | 7440417 | | | | | n | n |
| 4. Cadmium ^b | 7440439 | 4.3 e,i,m,w,x | 2.2 e,i,m,w | 42 i,m | 9.3 i,m | n | n |
| 5a. Chromium (III) | 16065831 | 550 e,i,m,o | 180 e,i,m,o | | | n | n |
| 5b. Chromium (VI) ^b | 18540299 | 16 i,m,w | 11 i,m,w | 1100 i,m | 50 i,m | n | n |
| 6. Copper ^b | 7440508 | 13 e,i,m,w,x | 9.0 e,i,m,w | 4.8 i,m | 3.1 i,m | 1300 | |
| 7. Lead ^b | 7439921 | 65 e,i,m | 2.5 e,i,m | 210 i,m | 8.1 i,m | n | n |
| 8. Mercury ^b | 7439976 | [Reserved] | [Reserved] | [Reserved] | [Reserved] | 0.050 a | 0.051 a |
| 9. Nickel ^b | 7440020 | 470 e,i,m,w | 52 e,i,m,w | 74 i,m | 8.2 i,m | 610 a | 4600 a |
| 10. Selenium ^b | 7782492 | [Reserved] p | 5.0 q | 290 i,m | 71 i,m | n | n |
| 11. Silver ^b | 7440224 | 3.4 e,i,m | | 1.9 i,m | | | |
| 12. Thallium | 7440280 | | | | | 1.7 a,s | 6.3 a,t |
| 13. Zinc ^b | 7440666 | 120 e,i,m,w,x | 120 e,i,m,w | 90 i,m | 81 i,m | | |
| 14. Cyanide ^b | 57125 | 22 o | 5.2 o | 1 r | 1 r | 700 a | 220,000 a,j |
| 15. Asbestos | 1332214 | | | | | 7,000,000 fibers/L k,s | |
| 16. 2,3,7,8-TCDD (Dioxin) | 1746016 | | | | | 0.000000013 c | 0.000000014 c |
| 17. Acrolein | 107028 | | | | | 320 s | 780 t |
| 18. Acrylonitrile | 107131 | | | | | 0.059 a,c,s | 0.66 a,c,t |
| 19. Benzene | 71432 | | | | | 1.2 a,c | 71 a,c |
| 20. Bromoform | 75252 | | | | | 4.3 a,c | 360 a,c |
| 21. Carbon Tetrachloride | 56235 | | | | | 0.25 a,c,s | 4.4 a,c,t |
| 22. Chlorobenzene | 108907 | | | | | 680 a,s | 21,000 a,j,t |
| 23. Chloroethylbromomethane | 124481 | | | | | 0.401 a,c | 34 a,c |
| 24. Chloroethane | 75003 | | | | | | |
| 25. 2-Chloroethylvinyl Ether | 110758 | | | | | | |

| | | | | | | | |
|--------------------------------|--------|--------|--------|----|-----|-------------|-----------------|
| 26. Chloroform | 67663 | | | | | [Reserved] | [Reserved] |
| 27. Dichlorobromomethane | 75274 | | | | | 0.56 a,c | 46 a,c |
| 28. 1,1-Dichloroethane | 75343 | | | | | | |
| 29. 1,2-Dichloroethane | 107062 | | | | | 0.38 a,c,s | 99 a,c,t |
| 30. 1,1-Dichloroethylene | 75354 | | | | | 0.057 a,c,s | 3.2 a,c,t |
| 31. 1,2-Dichloropropane | 78875 | | | | | 0.52 a | 39 a |
| 32. 1,3-Dichloropropylene | 542756 | | | | | 10 a,s | 1,700 a,t |
| 33. Ethylbenzene | 100414 | | | | | 3,100 a,s | 29,000 a,t |
| 34. Methyl Bromide | 74839 | | | | | 48 a | 4,000 a |
| 35. Methyl Chloride | 74873 | | | | | n | n |
| 36. Methylene Chloride | 75092 | | | | | 4.7 a,c | 1,600 a,c |
| 37. 1,1,2,2-Tetrachloroethane | 79345 | | | | | 0.17 a,c,s | 11 a,c,t |
| 38. Tetrachloroethylene | 127184 | | | | | 0.8 c,s | 8.85 c,t |
| 39. Toluene | 108883 | | | | | 6,800 a | 200,000 a |
| 40. 1,2-Trans-Dichloroethylene | 156605 | | | | | 700 a | 140,000 a |
| 41. 1,1,1-Trichloroethane | 71556 | | | | | n | n |
| 42. 1,1,2-Trichloroethane | 79005 | | | | | 0.60 a,c,s | 42 a,c,t |
| 43. Trichloroethylene | 79016 | | | | | 2.7 c,s | 81 c,t |
| 44. Vinyl Chloride | 75014 | | | | | 2 c,s | 525 c,t |
| 45. 2-Chlorophenol | 95578 | | | | | 120 a | 400 a |
| 46. 2,4-Dichlorophenol | 120832 | | | | | 93 a,s | 790 a,t |
| 47. 2,4-Dimethylphenol | 105679 | | | | | 540 a | 2,300 a |
| 48. 2-Methyl-4,6-Dinitrophenol | 534521 | | | | | 13.4 s | 765 t |
| 49. 2,4-Dinitrophenol | 51285 | | | | | 70 a,s | 14,000 a,t |
| 50. 2-Nitrophenol | 88755 | | | | | | |
| 51. 4-Nitrophenol | 100027 | | | | | | |
| 52. 3-Methyl-4-Chlorophenol | 59507 | | | | | | |
| 53. Pentachlorophenol | 87865 | 19 f,w | 15 f,w | 13 | 7.9 | 0.28 a,c | 8.2 a,c,j |
| 54. Phenol | 108952 | | | | | 21,000 a | 4,600,000 a,j,t |
| 55. 2,4,6-Trichlorophenol | 88062 | | | | | 2.1 a,c | 6.5 a,c |
| 56. Acenaphthene | 83329 | | | | | 1,200 a | 2,700 a |
| 57. Acenaphthylene | 208968 | | | | | | |
| 58. Anthracene | 120127 | | | | | 9,600 a | 110,000 a |

| | | | | | | | |
|---------------------------------|----------|--|--|--|--|---------------|---------------|
| 59. Benzidine | 92875 | | | | | 0.00012 a,c,s | 0.00054 a,c,t |
| 60. Benzo(a)Anthracene | 56553 | | | | | 0.0044 a,c | 0.049 a,c |
| benzo(a)Pyrene | 50328 | | | | | 0.0044 a,c | 0.049 a,c |
| 62. Benzo(b)Fluoranthene | 205992 | | | | | 0.0044 a,c | 0.049 a,c |
| 63. Benzo(ghi)Perylene | 191242 | | | | | | |
| 64. Benzo(k)Fluoranthene | 207089 | | | | | 0.0044 a,c | 0.049 a,c |
| 65. Bis(2-Chloroethoxy)Methane | 111911 | | | | | | |
| 66. Bis(2-Chloroethyl)Ether | 111444 | | | | | 0.031 a,c,s | 1.4 a,c,t |
| 67. Bis(2-Chloroisopropyl)Ether | 39638329 | | | | | 1,400 a | 170,000 a,t |
| 68. Bis(2-Ethylhexyl)Phthalate | 117817 | | | | | 1.8 a,c,s | 5.9 a,c,t |
| 69. 4-Bromophenyl Phenyl Ether | 101553 | | | | | | |
| 70. Butylbenzyl Phthalate | 85687 | | | | | 3,000 a | 5,200 a |
| 71. 2-Chloronaphthalene | 91587 | | | | | 1,700 a | 4,300 a |
| 72. 4-Chlorophenyl Phenyl Ether | 7005723 | | | | | | |
| 73. Chrysene | 218019 | | | | | 0.0044 a,c | 0.049 a,c |
| 74. Dibenzo(a,h)Anthracene | 53703 | | | | | 0.0044 a,c | 0.049 a,c |
| 75. 1,2 Dichlorobenzene | 95501 | | | | | 2,700 a | 17,000 a |
| 76. 1,3 Dichlorobenzene | 541731 | | | | | 400 | 2,600 |
| 77. 1,4 Dichlorobenzene | 106467 | | | | | 400 | 2,600 |
| 3,3'-Dichlorobenzidine | 91941 | | | | | 0.04 a,c,s | 0.077 a,c,t |
| 79. Diethyl Phthalate | 84662 | | | | | 23,000 a,s | 120,000 a,t |
| 80. Dimethyl Phthalate | 131113 | | | | | 313,000 s | 2,900,000 t |
| 81. Di-n-Butyl Phthalate | 84742 | | | | | 2,700 a,s | 12,000 a,t |
| 82. 2,4-Dinitrotoluene | 121142 | | | | | 0.11 c,s | 9.1 c,t |
| 83. 2,6-Dinitrotoluene | 606202 | | | | | | |
| 84. Di-n-Octyl Phthalate | 117840 | | | | | | |
| 85. 1,2-Diphenylhydrazine | 122667 | | | | | 0.040 a,c,s | 0.54 a,c,t |
| 86. Fluoranthene | 206440 | | | | | 300 a | 370 a |
| 87. Fluorene | 86737 | | | | | 1,300 a | 14,000 a |
| 88. Hexachlorobenzene | 118741 | | | | | 0.00075 a,c | 0.00077 a,c |
| 89. Hexachlorobutadiene | 87583 | | | | | 0.44 a,c,s | 50 a,c,t |
| 90. Hexachlorocyclopentadiene | 77474 | | | | | 240 a,s | 17,000 a,j,t |
| 91. Hexachloroethane | 67721 | | | | | 1.9 a,c,s | 8.9 a,c,t |

| | | | | | | | |
|---|----------|---------|----------|---------|----------|---------------|-------------|
| 92. Indeno(1,2,3-cd) Pyrene | 193395 | | | | | 0.0044 a,c | 0.049 a,c |
| 93. Isophorone | 78591 | | | | | 8.4 c,s | 600 c,t |
| 94. Naphthalene | 91203 | | | | | | |
| 95. Nitrobenzene | 98953 | | | | | 7 a,s | 1,900 a,j,t |
| 96. N-Nitrosodimethylamine | 62759 | | | | | 0.00069 a,c,s | 8.1 a,c,t |
| 97. N-Nitrosodi-n-Propylamine | 621647 | | | | | 0.005 a | 1.4 a |
| 98. N-Nitrosodiphenylamine | 86306 | | | | | 5.0 a,c,s | 16 a,c,t |
| 99. Phenanthrene | 85018 | | | | | | |
| 100. Pyrene | 129000 | | | | | 960 a | 11,000 a |
| 101. 1,2,4-Trichlorobenzene | 120821 | | | | | | |
| 102. Aldrin | 309002 | 3 g | | 1.3 g | | 0.00013 a,c | 0.00014 a,c |
| 103. alpha-BHC | 319846 | | | | | 0.0039 a,c | 0.013 a,c |
| 104. beta-BHC | 319857 | | | | | 0.014 a,c | 0.046 a,c |
| 105. gamma-BHC | 58899 | 0.95 w | | 0.16 g | | 0.019 c | 0.063 c |
| 106. delta-BHC | 319868 | | | | | | |
| 107. Chlordane | 57749 | 2.4 g | 0.0043 g | 0.09 g | 0.004 g | 0.00057 a,c | 0.00059 a,c |
| 108. 4,4'-DDT | 50293 | 1.1 g | 0.001 g | 0.13 g | 0.001 g | 0.00059 a,c | 0.00059 a,c |
| 109. 4,4'-DDE | 72559 | | | | | 0.00059 a,c | 0.00059 a,c |
| 110. 4,4'-DDD | 72548 | | | | | 0.00083 a,c | 0.00084 a,c |
| 111. Dieldrin | 60571 | 0.24 w | 0.056 w | 0.71 g | 0.0019 g | 0.00014 a,c | 0.00014 a,c |
| 112. alpha-Endosulfan | 959988 | 0.22 g | 0.056 g | 0.034 g | 0.0087 g | 110 a | 240 a |
| 113. beta-Endosulfan | 33213659 | 0.22 g | 0.056 g | 0.034 g | 0.0087 g | 110 a | 240 a |
| 114. Endosulfan Sulfate | 1031078 | | | | | 110 a | 240 a |
| 115. Endrin | 72208 | 0.086 w | 0.036 w | 0.037 g | 0.0023 g | 0.76 a | 0.81 a,j |
| 116. Endrin Aldehyde | 7421934 | | | | | 0.76 a | 0.81 a,j |
| 117. Heptachlor | 76448 | 0.52 g | 0.0038 g | 0.053 g | 0.0036 g | 0.00021 a,c | 0.00021 a,c |
| 118. Heptachlor Epoxide | 1024573 | 0.52 g | 0.0038 g | 0.053 g | 0.0036 g | 0.00010 a,c | 0.00011 a,c |
| 119-125. Polychlorinated biphenyls (PCBs) | | | 0.014 u | | 0.03 u | 0.00017 c,v | 0.00017 c,v |
| 126. Toxaphene | 8001352 | 0.73 | 0.0002 | 0.21 | 0.0002 | 0.00073 a,c | 0.00075 a,c |
| | | | | | | | |
| Total Number of Criteria * | | 22 | 21 | 22 | 20 | 92 | 90 |

Footnotes to Table in Paragraph (b)(1):

a. Criteria revised to reflect the Agency C₁* or R₁E, as contained in the Integrated Risk Information System (IRIS) as of October 1, 1998. The fish tissue bioconcentration factor (B₁) from the 1980 documents was retained in each case.

b. Criteria apply to California waters except for those waters subject to objectives in Tables III-2A and III-2B of the San Francisco Regional Water Quality Control Board's (SFRWQCB) 1986 Basin Plan, that were adopted by the SFRWQCB and the State Water Resources Control Board, approved by EPA, and which continue to apply.

c. Criteria are based on carcinogenicity of 10⁻⁶ risk.

d. Criteria Maximum Concentration (CMC) equals the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time without deleterious effects. Criteria Continuous Concentration (CCC) equals the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects. µg/L equals micrograms per liter.

e. Freshwater aquatic life criteria for metals are expressed as a function of total hardness (mg/L) in the water body. The equations are provided in matrix at paragraph (b)(2) of this section. Values displayed above in the matrix correspond to a total hardness of 100 mg/l.

f. Freshwater aquatic life criteria for pentachlorophenol are expressed as a function of pH, and are calculated as follows: Values displayed above in the matrix correspond to a pH of 7.8. CMC = $\text{exp}(1.005(\text{pH}) - 4.869)$. CCC = $\text{exp}(1.005(\text{pH}) - 5.134)$.

g. This criterion is based on 304(a) aquatic life criterion issued in 1980, and was issued in one of the following documents: Aldrin/Dieldrin (EPA 440/5-80-019), Chlordane (EPA 440/5-80-027), DDT (EPA 440/5-80-038), Endosulfan (EPA 440/5-80-046), Endrin (EPA 440/5-80-047), Heptachlor (EPA 440/5-80-052), Hexachlorocyclohexane (EPA 440/5-80-054), Silver (EPA 440/5-80-071). The Minimum Data Requirements and derivation procedures were different in the 1980 Guidelines than in the 1985 Guidelines. For example, a "CMC" derived using the 1980 Guidelines was derived to be used as an instantaneous maximum. If assessment is to be done using an averaging period, the values given should be divided by 2 to obtain a value that is more comparable to a CMC derived using the 1985 Guidelines.

h. These totals simply sum the criteria in each column. For aquatic life, there are 23 priority toxic pollutants with some type of freshwater or saltwater, acute or chronic criteria. For human health, there are 92 priority toxic pollutants with either "water + organism" or "organism only" criteria. Note that these totals count chromium as one pollutant even though EPA has developed criteria based on two valence states. In the matrix, EPA has assigned numbers 5a and 5b to the criteria for chromium to reflect the fact that the list of 126 priority pollutants includes only a single listing for chromium.

i. Criteria for these metals are expressed as a function of the water-effect ratio, WER, as defined in paragraph (c) of this section. CMC

= column B1 or C1 value x WER; CCC = column B2 or C2 value x WER.

j. No criterion for protection of human health from consumption of aquatic organisms (excluding water) was presented in the 1980 criteria document or in the 1986 Quality Criteria for Water. Nevertheless, sufficient information was presented in the 1980 document to allow a calculation of a criterion, even though the results of such a calculation were not shown in the document.

k. The CWA 304(a) criterion for asbestos is the MCL.

l. [Reserved]

m. These freshwater and saltwater criteria for metals are expressed in terms of the dissolved fraction of the metal in the water column. Criterion values were calculated by using EPA's Clean Water Act 304(a) guidance values (described in the total recoverable fraction) and then applying the conversion factors in § 131.38(b)(1) and (2).

n. EPA is not promulgating human health criteria for these contaminants. However, permit authorities should address these contaminants in NPDES permit actions using the State's existing narrative criteria for toxics.

o. These criteria were promulgated for specific waters in California in the National Toxics Rule ("NTR"), at § 131.36. The specific waters to which the NTR criteria apply include: Waters of the State defined as bays or estuaries and waters of the State defined as inland, i.e., all surface waters of the State not ocean waters. These waters specifically include the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta. This section does not apply instead of the NTR for this criterion.

p. A criterion of 20 µg/l was promulgated for specific waters in California in the NTR and was promulgated in the total recoverable form. The specific waters to which the NTR criterion applies include: Waters of the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta; and waters of Salt Slough, Mud Slough (north) and the San Joaquin River, Sack Dam to the mouth of the Merced River. This section does not apply instead of the NTR for this criterion. The State of California adopted and EPA approved a site specific criterion for the San Joaquin River, mouth of Merced to Vernalis; therefore, this section does not apply to these waters.

q. This criterion is expressed in the total recoverable form. This criterion was promulgated for specific waters in California in the NTR and was promulgated in the total recoverable form. The specific waters to which the NTR criterion applies include: Waters of the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta; and waters of Salt Slough, Mud Slough (north) and the San Joaquin River, Sack Dam to Vernalis. This criterion does not apply instead of the NTR for these waters. This criterion applies to additional waters of the United States in the State of California pursuant to 40 CFR 131.38(c). The State of California adopted and EPA approved a site-specific criterion for the Grassland Water District, San Luis National Wildlife Refuge, and the Los Banos

State Wildlife Refuge; therefore, this criterion does not apply to these waters.

r. These criteria were promulgated for specific waters in California in the NTR. The specific waters to which the NTR criteria apply include: Waters of the State defined as bays or estuaries including the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta. This section does not apply instead of the NTR for these criteria.

s. These criteria were promulgated for specific waters in California in the NTR. The specific waters to which the NTR criteria apply include: Waters of the Sacramento-San Joaquin Delta and waters of the State defined as inland (i.e., all surface waters of the State not bays or estuaries or ocean) that include a MUN use designation. This section does not apply instead of the NTR for these criteria.

t. These criteria were promulgated for specific waters in California in the NTR. The specific waters to which the NTR criteria apply include: Waters of the State defined as bays and estuaries including San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta; and waters of the State defined as inland (i.e., all surface waters of the State not bays or estuaries or ocean) without a MUN use designation. This section does not apply instead of the NTR for these criteria.

u. PCBs are a class of chemicals which include aroclors 1242, 1254, 1221, 1232, 1248, 1260, and 1016, CAS numbers 53469219, 11097691, 11104282, 11141165, 12672296, 11098825, and 12674112, respectively. The aquatic life criteria apply to the sum of this set of seven aroclors.

v. This criterion applies to total PCBs, e.g., the sum of all congener or isomer or homolog or aroclor analyses.

w. This criterion has been recalculated pursuant to the 1995 Updates: Water Quality Criteria Documents for the Protection of Aquatic Life in Ambient Water, Office of Water, EPA-820-B-96-001, September 1996. See also Great Lakes Water Quality Initiative Criteria Documents for the Protection of Aquatic Life in Ambient Water, Office of Water, EPA-80-B-95-004, March 1995.

x. The State of California has adopted and EPA has approved site specific criteria for the Sacramento River (and tributaries) above Hamilton City; therefore, these criteria do not apply to these waters.

General Notes to Table in Paragraph (b)(1)

1. The table in this paragraph (b)(1) lists all of EPA's priority toxic pollutants whether or not criteria guidance are available. Blank spaces indicate the absence of national section 304(a) criteria guidance. Because of variations in chemical nomenclature systems, this listing of toxic pollutants does not duplicate the listing in Appendix A to 40 CFR Part 423-126 Priority Pollutants. EPA has added the Chemical Abstracts Service (CAS) registry numbers, which provide a unique identification for each chemical.

2. The following chemicals have organoleptic-based criteria recommendations that are not included on this chart: zinc, 3-methyl-4-chlorophenol.

3. Freshwater and saltwater aquatic life criteria apply as specified in paragraph (c)(3) of this section.

(2) Factors for Calculating Metals Criteria. Final CMC and CCC values

should be rounded to two significant figures.

$$(i) CMC = WER \times (Acute Conversion Factor) \times (\exp\{m_A[\ln(hardness)] + b_A\})$$

$$(ii) CCC = WER \times (Acute Conversion Factor) \times (\exp\{m_C[\ln(hardness)] + b_C\})$$

(iii) Table 1 to paragraph (b)(2) of this section:

| Metal | m_A | b_A | m_C | b_C |
|----------------|--------|---------|--------|--------|
| Cadmium | 1.128 | -3.6867 | 0.7852 | -2.715 |
| Copper | 0.9422 | -1.700 | 0.8545 | -1.702 |
| Chromium (III) | 0.8190 | 3.688 | 0.8190 | 1.561 |
| Lead | 1.273 | -1.460 | 1.273 | -4.705 |
| Nickel | 0.8460 | 2.255 | 0.8460 | 0.0584 |
| Silver | 1.72 | -6.52 | | |
| Zinc | 0.8473 | 0.884 | 0.8473 | 0.884 |

Note to Table 1: The term "exp" represents the base e exponential function.

(iv) Table 2 to paragraph (b)(2) of this section:

| Metal | Conversion factor (CF) for freshwater acute criteria | CF for freshwater chronic criteria | CF for saltwater acute criteria | CF* for saltwater chronic criteria |
|----------------|--|------------------------------------|---------------------------------|------------------------------------|
| Antimony | (^d) | (^d) | (^d) | (^d) |
| Arsenic | 1.000 | 1.000 | 1.000 | 1.000 |
| Beryllium | (^d) | (^d) | (^d) | (^d) |
| Cadmium | 0.944 | 0.909 | 0.994 | 0.994 |
| Chromium (III) | 0.316 | 0.860 | (^d) | (^d) |
| Chromium (VI) | 0.982 | 0.962 | 0.993 | 0.993 |
| Copper | 0.960 | 0.960 | 0.83 | 0.83 |
| Lead | 0.791 | 0.791 | 0.951 | 0.951 |
| Mercury | | | | |
| Nickel | 0.998 | 0.997 | 0.990 | 0.990 |
| Selenium | | (^e) | 0.998 | 0.998 |
| Silver | 0.85 | (^d) | 0.85 | (^d) |
| Thallium | (^d) | (^d) | (^d) | (^d) |
| Zinc | 0.978 | 0.986 | 0.946 | 0.946 |

Footnotes to Table 2 of Paragraph (b)(2):

- * Conversion Factors for chronic marine criteria are not currently available. Conversion Factors for acute marine criteria have been used for both acute and chronic marine criteria.
- * Conversion Factors for these pollutants in freshwater are hardness dependent. CFs are based on a hardness of 100 mg/l as calcium carbonate (CaCO₃). Other hardness can be used; CFs should be recalculated using the equations in table 3 to paragraph (b)(2) of this section.
- * Bioaccumulative compound and inappropriate to adjust to percent dissolved.
- * EPA has not published an aquatic life criterion value.

Note to Table 2 of Paragraph (b)(2): The term "Conversion Factor" represents the recommended conversion factor for converting a metal criterion expressed as the total recoverable fraction in the water column to a criterion expressed as the dissolved

fraction in the water column. See "Office of Water Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria", October 1, 1993, by Martha G. Prothro, Acting Assistant Administrator for Water available from Water

Resource Center, USEPA, Mailcode RC4100, M Street SW, Washington, DC, 20460 and the note to § 131.36(b)(1).

(v) Table 3 to paragraph (b)(2) of this section:

| | Acute | Chronic |
|---------|--|--|
| Cadmium | CF=1.136672—[(ln {hardness}) (0.041838)] | CF = 1.101672—[(ln {hardness}) (0.041838)] |
| Lead | CF=1.46203—[(ln {hardness}) (0.145712)] | CF = 1.46203—[(ln {hardness}) (0.145712)] |

(c) *Applicability.* (1) The criteria in paragraph (b) of this section apply to the State's designated uses cited in paragraph (d) of this section and apply concurrently with any criteria adopted by the State, except when State regulations contain criteria which are more stringent for a particular parameter and use, or except as provided in footnotes p, q, and x to the table in paragraph (b)(1) of this section.

(2) The criteria established in this section are subject to the State's general

rules of applicability in the same way and to the same extent as are other Federally-adopted and State-adopted numeric toxics criteria when applied to the same use classifications including mixing zones, and low flow values below which numeric standards can be exceeded in flowing fresh waters.

(i) For all waters with mixing zone regulations or implementation procedures, the criteria apply at the appropriate locations within or at the boundary of the mixing zones;

otherwise the criteria apply throughout the water body including at the point of discharge into the water body.

(ii) The State shall not use a low flow value below which numeric standards can be exceeded that is less stringent than the flows in Table 4 to paragraph (c)(2) of this section for streams and rivers.

(iii) Table 4 to paragraph (c)(2) of this section:

| Criteria | Design flow |
|--------------------------------------|--------------------|
| Aquatic Life Acute Criteria (CMC). | 1 Q 10 or 1 B 3 |
| Aquatic Life Chronic Criteria (CCC). | 7 Q 10 or 4 B 3 |
| Human Health Criteria. | Harmonic Mean Flow |

Note to Table 4 of Paragraph (c)(2): 1. CMC (Criteria Maximum Concentration) is the water quality criteria to protect against acute effects in aquatic life and is the highest instream concentration of a priority toxic pollutant consisting of a short-term average not to be exceeded more than once every three years on the average.

2. CCC (Continuous Criteria Concentration) is the water quality criteria to protect against chronic effects in aquatic life and is the highest in stream concentration of a priority toxic pollutant consisting of a 4-day average not to be exceeded more than once every three years on the average.

3. 1 Q 10 is the lowest one day flow with an average recurrence frequency of once in 10 years determined hydrologically.

4. 1 B 3 is biologically based and indicates an allowable exceedence of once every 3 years. It is determined by EPA's computerized method (DFLOW model).

5. 7 Q 10 is the lowest average 7 consecutive day low flow with an average recurrence frequency of once in 10 years determined hydrologically.

6. 4 B 3 is biologically based and indicates an allowable exceedence for 4 consecutive days once every 3 years. It is determined by EPA's computerized method (DFLOW model).

(iv) If the State does not have such a low flow value below which numeric standards do not apply, then the criteria included in paragraph (d) of this section apply at all flows.

(v) If the CMC short-term averaging period, the CCC four-day averaging period, or once in three-year frequency is inappropriate for a criterion or the site to which a criterion applies, the State may apply to EPA for approval of an alternative averaging period, frequency, and related design flow. The State must submit to EPA the bases for any alternative averaging period, frequency, and related design flow. Before approving any change, EPA will publish for public comment, a document proposing the change.

(3) The freshwater and saltwater aquatic life criteria in the matrix in paragraph (b)(1) of this section apply as follows:

(i) For waters in which the salinity is equal to or less than 1 part per thousand 95% or more of the time, the applicable criteria are the freshwater criteria in Column B:

(ii) For waters in which the salinity is equal to or greater than 10 parts per thousand 95% or more of the time, the applicable criteria are the saltwater criteria in Column C except for selenium in the San Francisco Bay estuary where the applicable criteria are the freshwater criteria in Column B (refer to footnotes p and q to the table in paragraph (b)(1) of this section); and

(iii) For waters in which the salinity is between 1 and 10 parts per thousand as defined in paragraphs (c)(3)(i) and (ii) of this section, the applicable criteria are the more stringent of the freshwater or saltwater criteria. However, the Regional Administrator may approve the use of the alternative freshwater or saltwater criteria if scientifically defensible information and data demonstrate that on a site-specific basis the biology of the water body is dominated by freshwater aquatic life and that freshwater criteria are more appropriate; or conversely, the biology of the water body is dominated by saltwater aquatic life and that saltwater criteria are more appropriate. Before approving any change, EPA will publish for public comment a document proposing the change.

(4) *Application of metals criteria.* (i) For purposes of calculating freshwater aquatic life criteria for metals from the equations in paragraph (b)(2) of this section, for waters with a hardness of 400 mg/l or less as calcium carbonate, the actual ambient hardness of the surface water shall be used in those equations. For waters with a hardness of over 400 mg/l as calcium carbonate, a hardness of 400 mg/l as calcium carbonate shall be used with a default Water-Effect Ratio (WER) of 1, or the actual hardness of the ambient surface water shall be used with a WER. The same provisions apply for calculating the metals criteria for the comparisons provided for in paragraph (c)(3)(iii) of this section.

(ii) The hardness values used shall be consistent with the design discharge conditions established in paragraph (c)(2) of this section for design flows and mixing zones.

(iii) The criteria for metals (compounds #1—#13 in the table in paragraph (b)(1) of this section) are expressed as dissolved except where otherwise noted. For purposes of calculating aquatic life criteria for metals from the equations in footnote i to the table in paragraph (b)(1) of this section and the equations in paragraph (b)(2) of this section, the water effect

ratio is generally computed as a specific pollutant's acute or chronic toxicity value measured in water from the site covered by the standard, divided by the respective acute or chronic toxicity value in laboratory dilution water. To use a water effect ratio other than the default of 1, the WER must be determined as set forth in Interim Guidance on Determination and Use of Water Effect Ratios, U.S. EPA Office of Water, EPA-823-B-94-001, February 1994, or alternatively, other scientifically defensible methods adopted by the State as part of its water quality standards program and approved by EPA. For calculation of criteria using site-specific values for both the hardness and the water effect ratio, the hardness used in the equations in paragraph (b)(2) of this section must be determined as required in paragraph (c)(4)(ii) of this section. Water hardness must be calculated from the measured calcium and magnesium ions present, and the ratio of calcium to magnesium should be approximately the same in standard laboratory toxicity testing water as in the site water.

(d)(1) Except as specified in paragraph (d)(3) of this section, all waters assigned any aquatic life or human health use classifications in the Water Quality Control Plans for the various Basins of the State ("Basin Plans") adopted by the California State Water Resources Control Board ("SWRCB"), except for ocean waters covered by the Water Quality Control Plan for Ocean Waters of California ("Ocean Plan") adopted by the SWRCB with resolution Number 90-27 on March 22, 1990, are subject to the criteria in paragraph (d)(2) of this section, without exception. These criteria apply to waters identified in the Basin Plans. More particularly, these criteria apply to waters identified in the Basin Plan chapters designating beneficial uses for waters within the region. Although the State has adopted several use designations for each of these waters, for purposes of this action, the specific standards to be applied in paragraph (d)(2) of this section are based on the presence in all waters of some aquatic life designation and the presence or absence of the MUN use designation (municipal and domestic supply). (See Basin Plans for more detailed use definitions.)

(2) The criteria from the table in paragraph (b)(1) of this section apply to the water and use classifications defined in paragraph (d)(1) of this section as follows:

| Water and use classification | Applicable criteria |
|--|--|
| (i) All inland waters of the United States or enclosed bays and estuaries that are waters of the United States that include a MUN use designation. | (A) Columns B1 and B2—all pollutants (B) Columns C1 and C2—all pollutants (C) Column D1—all pollutants |
| (ii) All inland waters of the United States or enclosed bays and estuaries that are waters of the United States that do not include a MUN use designation. | (A) Columns B1 and B2—all pollutants (B) Columns C1 and C2—all pollutants (C) Column D2—all pollutants |

(3) Nothing in this section is intended to apply instead of specific criteria, including specific criteria for the San Francisco Bay estuary, promulgated for California in the National Toxics Rule at § 131.36.

(4) The human health criteria shall be applied at the State-adopted 10 (-6) risk level.

(5) Nothing in this section applies to waters located in Indian Country.

(e) *Schedules of compliance.* (1) It is presumed that new and existing point source dischargers will promptly comply with any new or more restrictive water quality-based effluent limitations ("WQBELs") based on the water quality criteria set forth in this section.

(2) When a permit issued on or after May 18, 2000 to a new discharger contains a WQBEL based on water quality criteria set forth in paragraph (b) of this section, the permittee shall comply with such WQBEL upon the commencement of the discharge. A new discharger is defined as any building, structure, facility, or installation from which there is or may be a "discharge of pollutants" (as defined in 40 CFR 122.2) to the State of California's inland surface waters or enclosed bays and estuaries, the construction of which commences after May 18, 2000.

(3) Where an existing discharger reasonably believes that it will be infeasible to promptly comply with a new or more restrictive WQBEL based on the water quality criteria set forth in this section, the discharger may request approval from the permit issuing authority for a schedule of compliance.

(4) A compliance schedule shall require compliance with WQBELs based on water quality criteria set forth in paragraph (b) of this section as soon as possible, taking into account the dischargers' technical ability to achieve compliance with such WQBEL.

(5) If the schedule of compliance exceeds one year from the date of permit issuance, reissuance or modification, the schedule shall set forth interim requirements and dates for their achievement. The dates of completion between each requirement may not exceed one year. If the time necessary for completion of any requirement is more than one year and is not readily divisible into stages for completion, the permit shall require, at a minimum, specified dates for annual submission of progress reports on the status of interim requirements.

(6) In no event shall the permit issuing authority approve a schedule of compliance for a point source discharge

which exceeds five years from the date of permit issuance, reissuance, or modification, whichever is sooner. Where shorter schedules of compliance are prescribed or schedules of compliance are prohibited by law, those provisions shall govern.

(7) If a schedule of compliance exceeds the term of a permit, interim permit limits effective during the permit shall be included in the permit and addressed in the permit's fact sheet or statement of basis. The administrative record for the permit shall reflect final permit limits and final compliance dates. Final compliance dates for final permit limits, which do not occur during the term of the permit, must occur within five years from the date of issuance, reissuance or modification of the permit which initiates the compliance schedule. Where shorter schedules of compliance are prescribed or schedules of compliance are prohibited by law, those provisions shall govern.

(8) The provisions in this paragraph (e), Schedules of compliance, shall expire on May 18, 2005.

[FR Doc. 00-11106 Filed 5-17-00; 8:45 am]
BILLING CODE 6560-50-P